

ABSTRACT

Within the routing method and apparatus of the present invention, a router is coupled to multiple buses, each of the buses having one or more nodes. A node on a first bus structure sending a communication to a node on a second bus structure includes an address value within the communication addressed into the address space of the router. When the packet is received, the router then preferably uses a routing value within the address value to determine the bus number and node number of the target node. The router then uses this bus number and node number to remap the address value to the target node. This remapped address value is then included within the packet and transmitted on the appropriate bus structure directed to the appropriate node. In an alternate embodiment, the address value in a packet received by the router includes a table index value and a direct offset value. The table index value provides an index value into a table within the router and corresponds to a location in the table which includes a corresponding expanded bit value. The corresponding expanded bit value and the direct offset value are used by the router to remap the address value to the target node. This remapped address value is then included within the packet and transmitted on the appropriate bus structure directed to the appropriate node.